

{NOTE: This reference version of the application is made available to teams for planning purposes only. The final, on-line application will soon be available via the NASA Robotics Alliance web site at <http://robotics.nasa.gov>. All application submissions must be made through the web-based application form. No hardcopy applications will be accepted. Again, the text on the following pages is for planning purposes only.}

2005-2006 NASA Sponsorship Application Team Planning Document

Some Comments from the NASA Robotics Alliance Team

On behalf of NASA's Robotics Alliance Project, welcome to this year's application process. We are very excited that your school or organization is planning on participating in one of the NASA-related FIRST competitions this year. Our experience here at NASA with FIRST over the past few years has convinced us that this will be one of the most significant experiences your students, teachers, and mentors have ever had. You are choosing to provide your students with the opportunity to use their minds to accomplish an incredible task: starting with a bunch of unrelated parts and the ideas that exist only in the minds of your team members, create a functioning robot in only 6 weeks. Wow! As you get started with the process of applying to be sponsored by NASA, we want to explain a few things to you. First the facts, then a bit of philosophy. . .

Facts:

- Three classes of NASA sponsorship are available to FIRST teams. These are described below. Teams may only submit one application for a NASA sponsorship, and must select which of the three types of sponsorships to request.
- **Regional “Challenge Grants”:** In conjunction with the sponsorship of regional competition events, NASA is making Regional “Challenge Grants” available to teams that participate in these events. The grants provide \$6,000 funding to cover the registration costs for that event. All funding will be sent directly to FIRST, and FIRST will credit the accounts of teams selected to receive a NASA sponsorship. The Regional Challenge Grants are primarily intended for new rookie teams that are entering the FIRST program for the first time. Rookie teams that successfully participate in the program may apply for a second year of sponsorship. Second-year funding is available only to those teams that received a “rookie year grant” for that event during the prior competition year. During the first year of a new regional competition event, a series of “veteran team” grants will also be awarded. These grants are for one year only, and are awarded to veteran teams that are electing to attend the new event. By involving veteran FIRST teams in the new events, it is expected that the overall level of the competition, the quality of the experience, the transfer of knowledge and experience to the rookie teams, and the demonstration of values associated with

the FIRST program will be increased. For the 2006 competition season, Regional Challenge Grants will be available for the following events:

- Chesapeake Regional Competition: 10 second-year grants are available
 - Peachtree Regional Competition: 10 second-year grants are available
 - Denver Regional Competition: 10 second-year grants are available
 - Las Vegas Regional Competition: 10 rookie grants and 10 second-year grants are available
 - Boilermaker Regional Competition: 10 rookie grants and 10 second-year grants are available
 - Milwaukee Regional Competition: 10 rookie grants and 10 veteran grants are available
- **University Space Grant Sponsorship:** NASA University Space Grant Sponsorships are available to **teams from Idaho, Louisiana, Montana, Arizona, and Washington, DC** through the NASA University Space Grant Program. Teams from these four states and the District of Columbia are encouraged to apply for NASA University Space Grant funding which will provide \$10,000 per year for one to three years. These funds may be used for event registrations, materials, travel expenses, and other costs associated with implementing the team. Funding for the sponsorships will be distributed through the corresponding University Space Grant Consortium for the selected state. The University Space Grant Sponsorships are primarily intended for new rookie teams that are entering the FIRST program for the first time. Rookie teams that successfully participate in the program may apply for a second and third year of sponsorship. **NOTE: Due to the exceptional circumstances associated with the effects of Hurricane Katrina, all veteran teams from Louisiana and Mississippi will be permitted to apply for the Louisiana Space Grant Sponsorships. The Louisiana sponsorships will not be limited to rookie teams.**
- **Program Growth Grants:** This year a third type of grant is being offered to rookie teams from across the country. Up to forty (40) "Growth Grants" are being offered to teams participating in the FIRST competition for the first time. These sponsorships are not tied to any particular regional competition or limited to teams from any specific state. The grants will provide \$6,000 funding to cover the registration costs for the team to attend one regional competition event. All funding will be sent directly to FIRST, and FIRST will credit the accounts of teams selected to receive a NASA grant. Depending upon the availability of Congressionally-appropriated funding, rookie teams that successfully participate in the program may apply for a second year of sponsorship for 2007.
- Except as noted above, these NASA grant programs are primarily intended to provide support for rookie teams that are just entering the FIRST program. The intent of all three types of NASA sponsorships (Regional Challenge Grants, NASA University Space Grant Sponsorship, and Program Growth Grants) is to

assist in the formation of new teams. However, upon occasion it may not be possible to award all available grants to qualified rookie teams. In those situations, qualified veteran teams that have applied for the grants may receive grant awards. Awards to veteran teams will be considered after all rookie team selections have been awarded.

- Finally, while NASA strongly supports the expansion of the FIRST competition into a truly international event, *we regret that we cannot offer sponsorships to non-US teams.*

Several Important Notes:

- FIRST will **NOT** be making travel arrangements for sponsored teams. Teams will make their own kickoff and event travel reservations.
- Applications will be accepted through Tuesday, November 8th, 2005.
- NASA will review submitted applications and inform teams of their selection via the NASA Robotics Alliance Web site (<http://robotics.nasa.gov>) during the week of November 18th 2005.

Requirements:

All teams selected by NASA agree to the following conditions of sponsorship. Teams not complying with all sponsorship requirements will not be considered for future NASA grants and may be required to provide reimbursement of funds applied toward their team during the current year.

1. "NASA" must be identified as a team sponsor and appear in the sponsored team's official name on record with FIRST. Other sponsors may be listed before or after NASA, but NASA must be included.
2. Sponsored teams agree to have *all* members complete a brief general survey at the beginning and end of the season to assist NASA in assessing the impact of the program.
3. Sponsored teams **MUST** complete a Chairman's Award submission and provide a duplicate copy to NASA. If the team is a rookie team (and therefore ineligible to submit a Chairman's Award to FIRST), the team must compose a narrative equivalent to the Chairman's Award and submit it to NASA. Either of these options will satisfy the requirement to submit a written annual report, as required of all Federal grant recipients.
4. Sponsored teams agree to complete a robot by the deadline specified by FIRST, and ship this robot to the appropriate competition.
5. Sponsored teams must attend the regional FIRST competition associated with the sponsorship that they applied for and received.
6. Sponsored teams agree to attend all three days (Thursday-Saturday) of the sponsored competition.
7. Sponsored teams acknowledge that the NASA sponsorship may not be transferred to another team, and must be used by the original team applying for

sponsorship.

Additionally, teams applying for a second or third year of NASA sponsorship must:

8. Demonstrate at least \$6000 of existing corporate or community funding and
9. Agree to mentor a rookie FIRST team either directly or via telephone/E-mail.

Philosophy

And now, a little philosophy behind the NASA application process. Participating in FIRST is incredibly rewarding but it is difficult - it will likely be one of the most difficult things your students have ever done. But, as Albert Einstein said, "In the middle of difficulty lies opportunity." Here at NASA we want you to succeed. It is our goal to use this application process for three purposes:

1. Enable new teams to get involved with FIRST
2. Ensure that selected teams are likely to succeed and
3. Assist teams by explaining what is necessary to succeed

The application consists of four parts. In Section 1, you will select the type of sponsorship (Regional Challenge Grant, University Space Grant, or Growth Grant) and the specific location that you will be applying to. Section 2 deals with logistical information including contact names and addresses. Section 3 of the online application consists of a series of open-ended questions designed to help you organize your team and your plans while also helping NASA to evaluate the strength of your approach and program. These questions have been carefully selected to represent those elements that are required to have a successful FIRST team. Answers dealing with who will help mentor your students, where you will build your robot, and how you will finance the project will help NASA to evaluate your proposal, but are actually more important in assisting you to plan a successful program. By fully answering these questions you are demonstrating that you have put some thought into the basic organization of your team and you are well on your way to a rewarding experience.

Finally, Section 4 applies only to those teams seeking a Regional Challenge Grant or Growth Grant. Teams applying for University Space Grant Sponsorships do NOT need to submit any supplemental material, but each team seeking a Regional Challenge Grant or Growth Grant must submit supporting documentation to NASA via U.S. Mail, postmarked by the application deadline, or their application will be incomplete and will not be considered for funding. The supplemental documentation will include a letter from the primary sponsor of the team indicating the team's desire to apply for funding, the sponsoring organization's commitment to the team, and the agreement to the conditions of sponsorship outlined above. Teams should begin working on this supporting information immediately, to avoid any last-minute problems.

The evaluation of the application Sections 1, 2, and 4 is easy, since they will not be "scored" by the NASA review committees. If these elements are incomplete, Section 3, the narrative section of your application, will not be evaluated since without the most

basic information from the first two sections, and the supporting documentation, your team is certainly not ready to participate in FIRST.

As you begin working on the application, don't view it as just paperwork that you must complete, but rather a tool for planning the success of your team. The entire NASA Robotics Alliance Team wishes you success, and we look forward to supporting you along the way!

Now, on to the application!

2005-2006 NASA FIRST Regional Competitions Application for NASA Sponsorship

Applications accepted through November 8th, 2005

How To Apply . . . A Quick Summary:

1. Plan by printing a hardcopy of the instructions and application (This is it!)
2. Complete the electronic sponsorship application (Sections 1, 2, and 3)
3. Send supporting documentation to NASA (Section 4).
4. Register with FIRST for the appropriate NASA-related regional competition.

How To Apply. . . Detailed Instructions:

1. Download and print out a paper version of the electronic application and instructions, which has been provided for you here as a PDF document, a Microsoft Word Document, and a plain text file (this is it!). Use this hardcopy version to gather necessary information and prepare answers to the essay-style questions in your favorite word processing application. You can then cut and paste your answers into the electronic form. Note: to view PDF documents, you will need the Adobe Acrobat plug-in, which may be freely downloaded from the Adobe web site. This is a good plug-in to install since the FIRST competition documentation may be distributed online as PDF files, and some of the robot kit suppliers also post PDF information about their products in this format.
2. When you are ready to submit electronically, go to the NASA sponsorship on-line application and fill it out completely. *Incomplete or hardcopy applications cannot be considered* due to the nature of the review process (national reviewers in many different locations). The electronic application process will allow you to complete Sections 1, 2 and 3 of the application.
3. Teams applying for Regional Challenge Grants or Growth Grants must prepare a letter, on official organizational letterhead, from the primary educational, corporate, or community sponsor of the team. This letter must indicate the team's desire to apply for funding, the sponsoring organization's commitment to the team, and their agreement to the conditions of sponsorship outlined above. This letter will constitute Section 4 of the application. The letter must be sent via US Mail, postmarked no later than the application deadline, to:

NASA Robotics Education FIRST Sponsorship Program
c/o Mr. Seth Carter
NASA Ames Research Center
Mail Stop T28-B
Moffett Field, CA 94035

4. This NASA application is only for NASA grants. You must also register with FIRST to actually attend one or more events. While you may attend multiple events, you *must* register for and attend the event associated with the NASA center that you are requesting sponsorship from. Register your team for one or more of the 2006 FIRST competitions at:

<http://my.usfirst.org/>

Grant applications and all supporting materials will be accepted through **November 8th, 2005**. The application review panels will consider your application, with grant award notifications being made during the week of November 18th, 2005.

2005-2006 NASA Sponsorship Application Application Login

Please provide the following information to begin the application process. This information was provided to you after filling out the initial, one-page preliminary application.

Primary Contact Email:
Password:

If you have not filled out the preliminary on-line application, take just a minute and do it right now at <http://robots.larc.nasa.gov> and you will receive your password.

Forgotten your password? Fill in your e-mail address and we will e-mail your password to you:

Primary Contact Email:

Information Validated!

Welcome back. We have successfully verified your contact information. Our records indicate that you will be submitting an application for **YOUR SCHOOL NAME**. If this is incorrect, please make any necessary corrections as you complete the full application below.

NASA Robotics Alliance Project Application for NASA Sponsorship for 2006 FIRST Regional Events (Section 1)

You may apply for NASA sponsorship only once each year.

Please select the type of grant for which you will be applying. You must select **either** a Regional Challenge Grant to attend one of the NASA-related regional competitions **or** a University Space Grant Sponsorship for the state that you live in **or** a Program Growth Grant:

Regional Challenge Grants (nominally open *only* to rookie- and second-year teams):

- Colorado Regional (Denver, CO)
- Peachtree Regional (Atlanta, GA)
- Chesapeake Regional (Annapolis, MD))
- Boilermaker Regional (Lafayette, IN)
- Las Vegas Regional (Las Vegas, NV)
- Wisconsin Regional (Milwaukee, WI) (includes a limited number of veteran team grants)

University Space Grant Sponsorships (open *only* to teams from these states):

- Idaho
- Louisiana and Mississippi
- Montana
- Arizona
- Washington, DC

Program Growth Grants

- Open to any rookie team from anywhere within the US, attending any FIRST regional event. Available to veteran teams as a secondary priority.

Go to Section 2

NASA Robotics Alliance Project

Application for NASA Sponsorship for 2006 FIRST

Regional Events

(Section 2)

Optional information is in yellow. All other information is required.

If awarded a NASA grant, will this be your team's first, second or third year as a NASA sponsored team?

- First year
- Second year
- Third year

Part I: School Information

Address:

Primary School
Name:
Street Address:
Street Address (cont.):
City:
State:
ZIP:
Office Phone:
Office Fax:

School Principal:

Title:
First
Name:
Last
Name:
E-mail:

Demographic Information:

Total number of students enrolled in entire school:
Approximate percentage of students receiving free/reduced lunch:
School type: Public Private
School location: Urban Rural Suburban

If the team will be comprised of students from multiple schools, please list additional schools here (please list school names only):

Part II: Primary Contact Information

Title:
First Name:
Last Name:

Daytime Phone:
Evening Phone:
Fax:
E-mail Address:
Subject(s) Taught:
Grade(s) Taught: 6 7 8 9 10 11 12 Administration
Years of teaching experience:

Part III: Alternate Contact Information

Title:
First Name:
Last Name:
Daytime Phone:
Evening Phone:
Fax:
E-mail Address:
Subject(s) Taught:
Grade(s) Taught: 6 7 8 9 10 11 12 Administration
Years of teaching experience:

Part IV: Corporate/Mentoring Contact Information

Title:
First Name:
Last Name:
Company/Organization:
Street Address:
Street Address (cont.):
City:
State:
ZIP:
Office Phone:
Office Fax:
E-mail Address:

Part V: General Information

1. What is your FIRST team number?
(Returning teams or teams that have already registered with FIRST only - if you don't have your FIRST team number yet, leave blank)
2. How many years has your team been involved with FIRST?
3. Including the NASA-related event that this sponsorship will cover, please indicate all of the FIRST events that your team plans to attend this year:
4. Is your team planning to register for the 2006 Championship? Yes No

Uncertain

5. How did you initially hear about this NASA sponsorship opportunity?

6. *(This question is for planning purposes only, and will not be considered in the evaluation of your application)* Is it likely that your team will attend the NASA-sponsored regional competition that would be funded by this sponsorship even if your team does *not* receive a NASA sponsorship? Yes No

Go To Section 3

NASA Robotics Alliance Project

Application for NASA Sponsorship for 2006 FIRST Regional Events

(Section 3)

It is strongly recommended that you type your answers to the following questions in your favorite word processing or text editing program and save that file. You can then cut your responses from that program and paste them into the boxes below. This will both ensure that you have a copy of your responses for your records and that you will not lose all of your work on this form in case of technical problems during transmission to NASA.

Please respond to each of the following questions. Provide enough information for reviewers to adequately understand how you plan to implement your team's participation in FIRST. The review panel will use your answers to these questions to determine how likely it is that your team will be successful. *Please note:* Formatting will NOT be preserved when the essay questions are transmitted to NASA. The 11 essay-style questions below will become 11 continuous blocks of text without paragraph separations or bold/italic text. Please save your time and do not try to provide fancy formatting because it will be lost, and may look worse than if you plan for continuous blocks of text. Also, do not use a table format to explain your budget - describe your budget in paragraph format.

This is the final section of the online application process. Upon submitting this form, you will be provided with a summary web page of all of your responses, as well as instructions on mailing your supporting documentation to NASA. Please make sure that you print and/or save a copy of the summary page for your records.

Part VI: Project Description

1. Why are you considering entering a team in the 2006 FIRST competition?
What will define success for your team?
2. Please address both of the following issues:
 - (a) Explain the relationship you envision among your students, faculty, and community partners as part of this year's FIRST experience (i.e. how will your team be organized to facilitate interaction among these groups); and
 - (b) Describe how you envision these groups working together and benefiting from their involvement with FIRST.
 - How many students do you anticipate participating in this FIRST program?
 - How many teachers do you anticipate actively participating in this FIRST team?

- How many corporate/community mentors will participate in this FIRST team?

3. FIRST provides high school students with many unique opportunities, but because of the nature of the competition as well as the travel that can be involved, participation in FIRST can require significant financial resources. In addition to the entrance fees, teams must budget for robot prototyping and construction, travel to one or more events, and miscellaneous items like team T-shirts. Please outline your anticipated budget (expenses) and how you plan to fund your team's participation (income) this year.

4. Please identify the corporate or community partners/mentors who will assist and instruct the students in fabrication, mechanical and electrical concepts, computer programming and control, and computer aided design and animation. How will they enable your students to be successful in this project?

5. Please describe how participation in FIRST will contribute to your school's overall educational goals, how FIRST will integrate with your existing curriculum and how you envision FIRST helping your students meet applicable local or national standards in math, science, and technology?

6. Access to adequate woodworking, metalworking, welding, and other facilities are important in the robot fabrication process. Some teams have these capabilities available at their school while others take advantage of tools and machine shops provided by their corporate partners. What facilities are available for your team's use in this year's FIRST program?

Woodworking
Metalworking
Welding
Software Development

Schools participating in FIRST receive the latest version of AutoDesk's AutoCAD-based drafting product for computer aided design/drafting and 3D Studio Max for 3D simulation and animation. Do you anticipate having mentors to assist students with:

AutoCAD
3D Studio MAX

Please describe the facilities that will be used by your team to design, prototype, and build your robot.

7. Another critical element for the success of a FIRST program within a school is the enthusiastic support of the school or group's administration. Do

you have support from your senior-level administration (i.e. principal or superintendent)? Yes No

8. {Year 2 teams only. Year 1 teams skip to question 11} If you are applying for year two funding please describe how you are planning to mentor a rookie team. If you are not yet mentoring a team, are you willing to mentor one if one is provided to you (i.e. via telephone or email conversation, personal visits, demonstrations, etc) Are you already mentoring or have you made arrangements to mentor a rookie team? Yes No

9. {Year 2 teams only. Year 1 teams skip to question 11} If you are applying for year two funding you must also demonstrate at least \$6,000 in existing community or corporate sponsorship. Please list below the company name, amount of sponsorship, contact at company, and contact telephone number so that the reviewers may verify this support.

Have you secured any corporate sponsorship already? Yes No

10. {Year 2 teams only. Year 1 teams skip to question 11} Have you incorporated FIRST robotics activities into your classroom or other classes at your school? Yes No. If yes, please describe.

11. Please describe what will set your team apart from other teams competing in this year's FIRST competition - what makes you unique? If there are any other considerations that you would like to share with the review panel, you may do so here as well.

Submit application!